



Omniksol WIFI Kit User Manual

Omnik New Energy Co., Ltd.

Overview of WiFi Kit Functions

Omniksol WIFI Kit is developed by Omnik as an external communication monitoring device, which integrates WiFi functions for users to monitor their systems remotely.

By connecting with inverters through RS485 interface, the kit can receive information from inverters and realize cascade of inverters. It can connect to the router both wirelessly or through network cable so as to transfer inverter data to the web server.

Users can monitor the runtime status of the device by checking the 4 LEDs on the panel which indicates Power, RS485, Link and Status respectively.

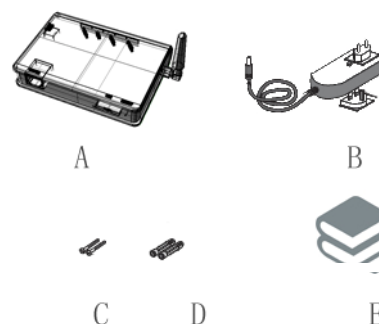
Catalog

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1. Unpack

After unpacking the box, please check the parts according to the below list. Contact the manufacturer immediately, should you find any damage, missing or wrong model of the device or any parts.

Serial	Name	Quantity	Model
A	PV data collector	1	WiFi kit
B	power supply adapter	1	FY0502000
C	screw	2	--
D	expanded rubber tube	2	--
E	manual	1	--



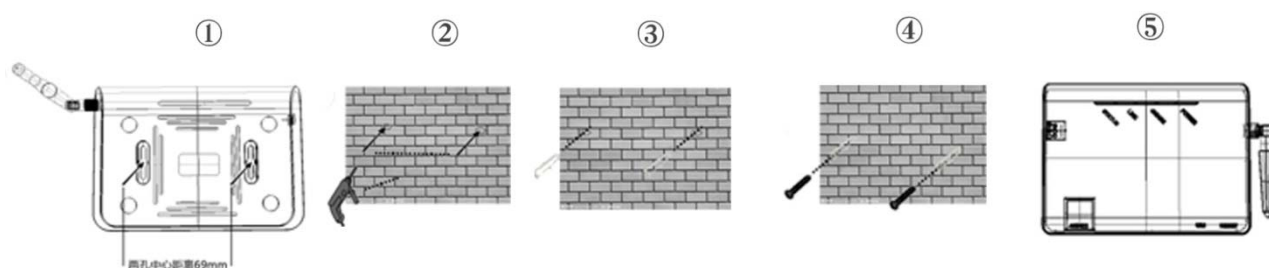
Picture1

2. The installation of data collector

2.1.Wall-mounted installation

1. Mark two horizontal round holes which distance is 69mm in the selected position;
2. Drill two $\phi 6$ mm holes in the marked position, the depth of the hole is not less than 30mm;
3. Punch the expanded rubber tubes into the holes lightly with a rubber hammer;
4. Wring two screws into the expanded rubber tubes, the screws head exposed wall about 6cm;
5. Hang the PV data collector WiFi kit on the screws (refer to the picture)。

Note: Note: The protection level of PV data collector WiFi kit is IP21. It cannot be installed outdoors or in the conditions of damp, dusty or with corrosive steam. Direct sunlight is also avoided. In addition, as metal components have effect on the wireless signals, the antenna of PV data collector (in all direction) should be away from metal components at least 10cm.



Picture2

2.2.Horizontal data collector installation

Lay the data collector on a flat surface。

Note: Note: The protection level of PV data collector WiFi kit is IP21. It cannot be installed outdoors or in the conditions of damp, dusty or with corrosive steam. Direct sunlight is also avoided, as well as shock and pressure defense. In addition, as metal components have effect on the wireless signals, the antenna of PV data collector (in all direction) should be away from metal components at least 10cm.

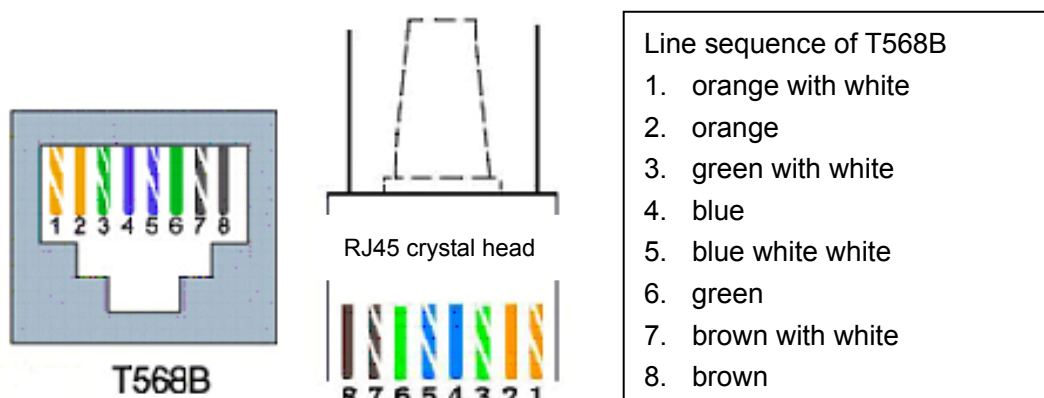
3. Connection between data collector and inverter

3.1. the instructions of data collector interface and connection line interface

serial	instructions
A	RS485/422 interface
B	Ethernet
C	Reset
D	SVDC power port
E	Antenna



Picture 3



Picture 4

Pin NO.	RS485	RS422
1	NC	NC
2	NC	NC
3	NC	RX+
4	A	TX+
5	B	TX-
6	NC	RX-
7	GND	GND
8	GND	GND

3.2. Steps of connection

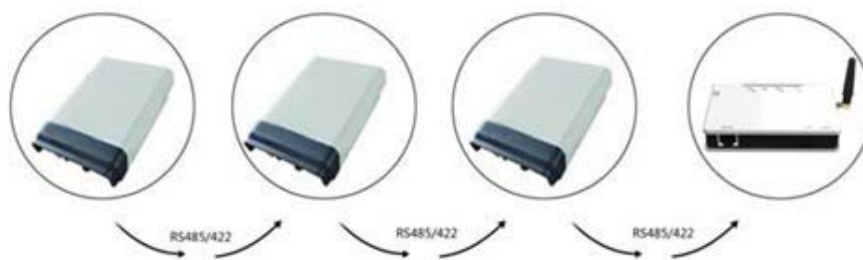
Both ends of the connecting wire are RJ45 network cable connector , all the line sequence are T568B.

3.2.1 Single inverter connection

1. cut of the power supply of the inverter;
2. Insert the network cable into anyone RJ45 port on anyone inverter;
3. Let the other network cable connects the network interface of PV data collector WiFi kit.
4. Connect the power supply adapter to data collector, then insert into the socket

3.2.2 Multiple inverter connection

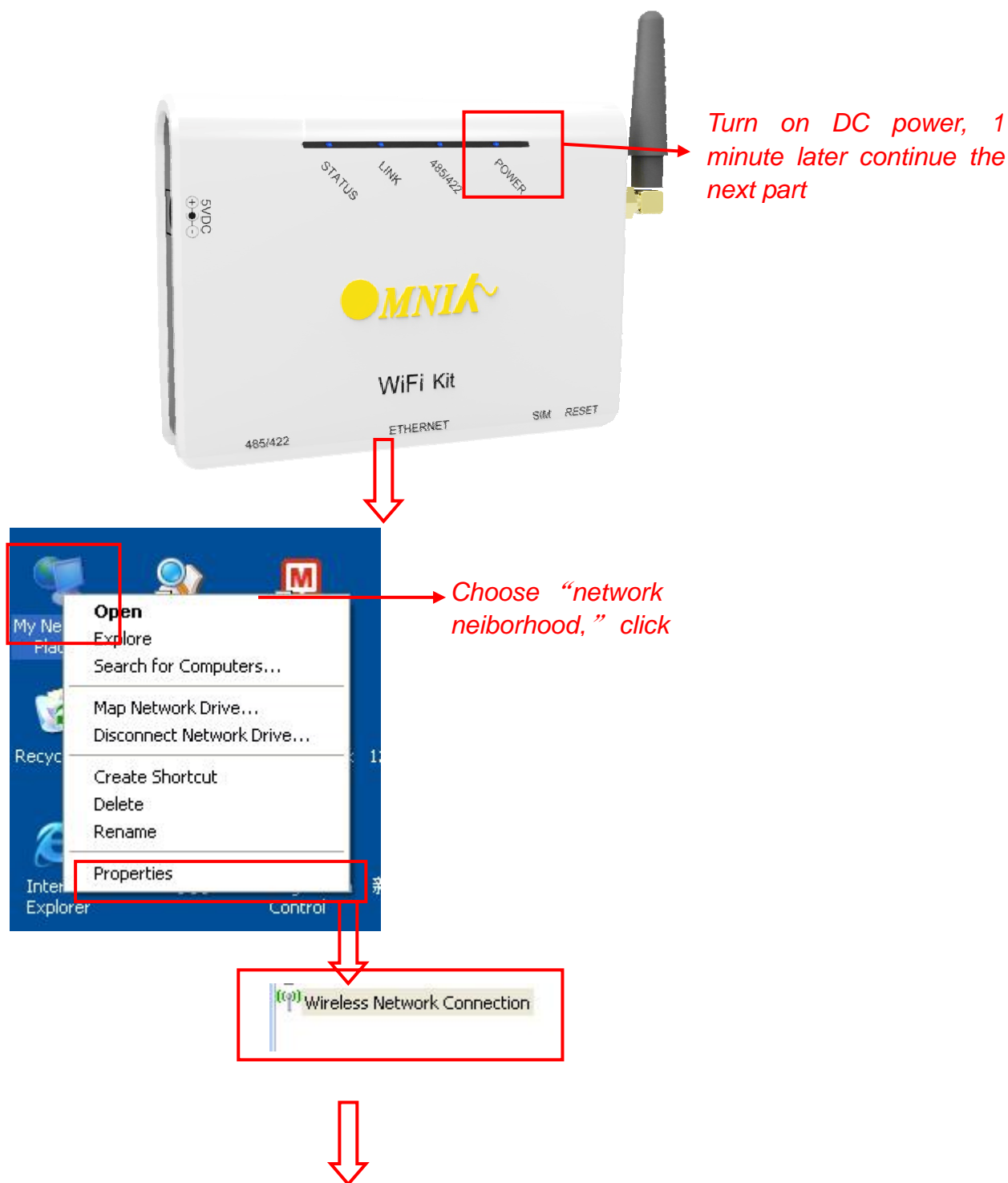
1. cut of the power supply of the inverter;
2. Insert the network cable into anyone RJ45 port on anyone inverter;
3. Insert the other network cable into anyone RJ45 port on second inverter;
4. Make the needed monitoring inverters in series in the same way;
5. Connect the PV data collector WiFi kit to a inverter with the bus, (constitute serial LAN) ;
6. Connect the power supply adapter to data collector, then insert into the socket

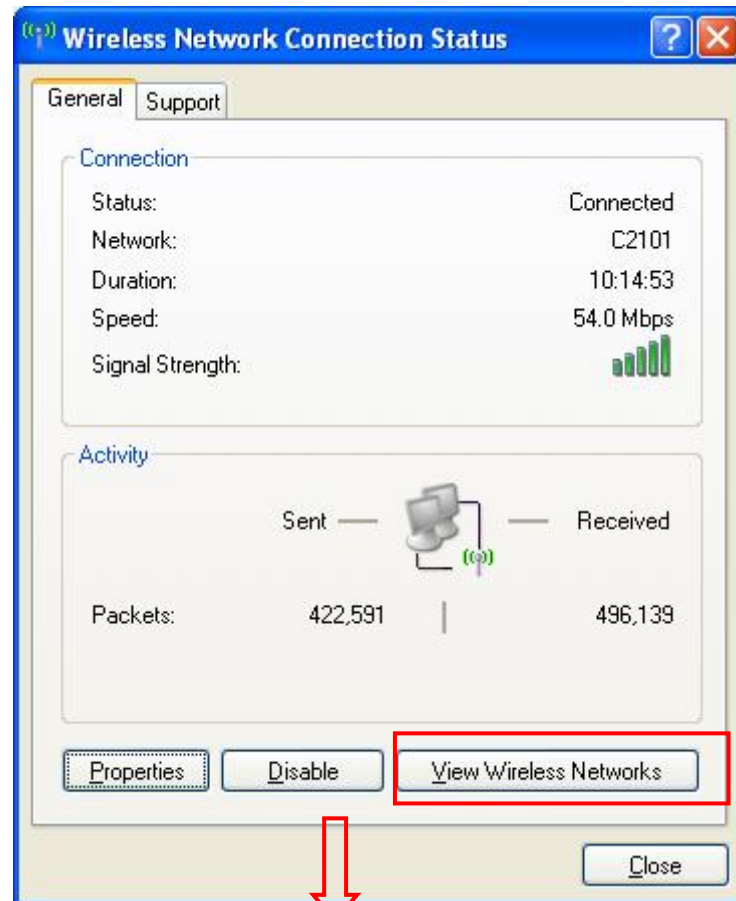


Picture 5

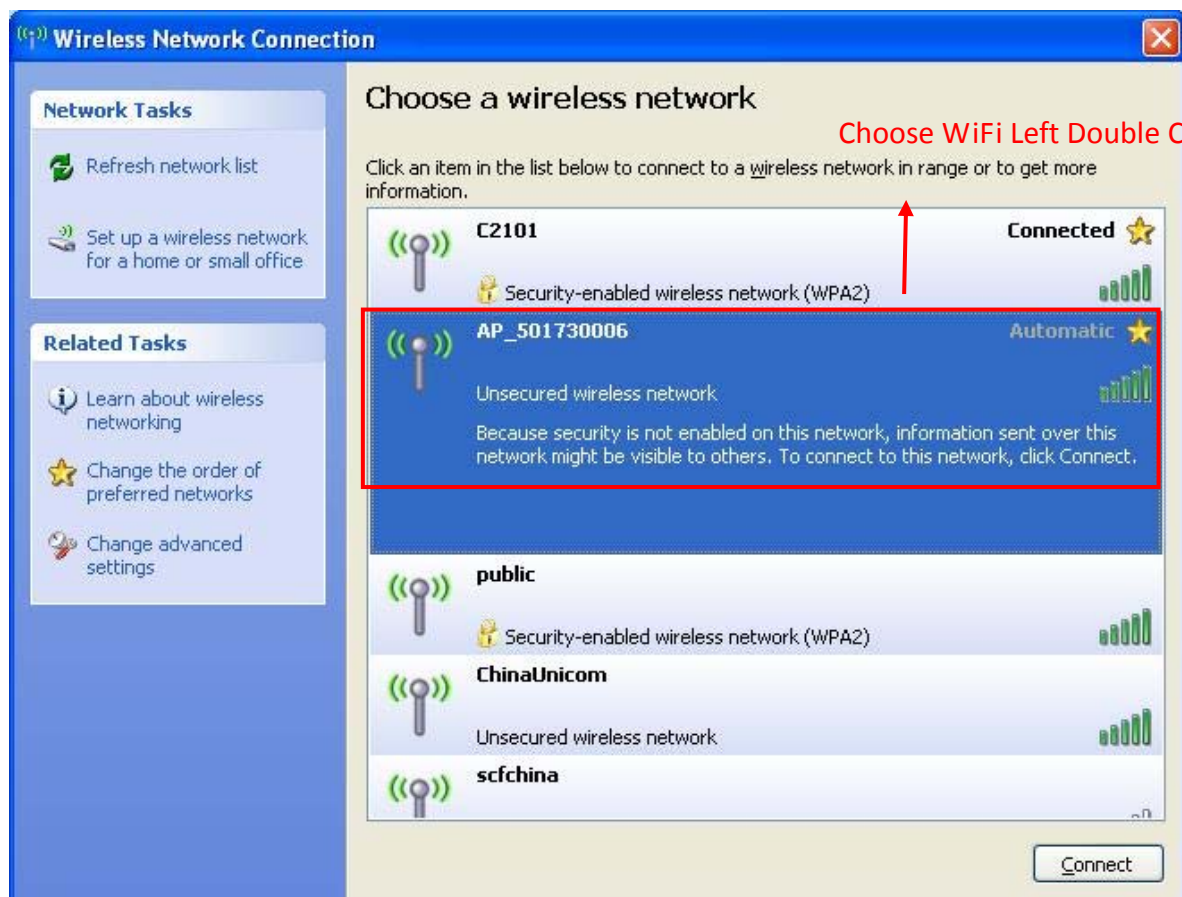
Note: Must cut off the power supply before connection. Please make sure that all the connections are completed, and then power the inverters and PV data collectors. Or may cause personal injury or equipment damage.

4. WiFi settings

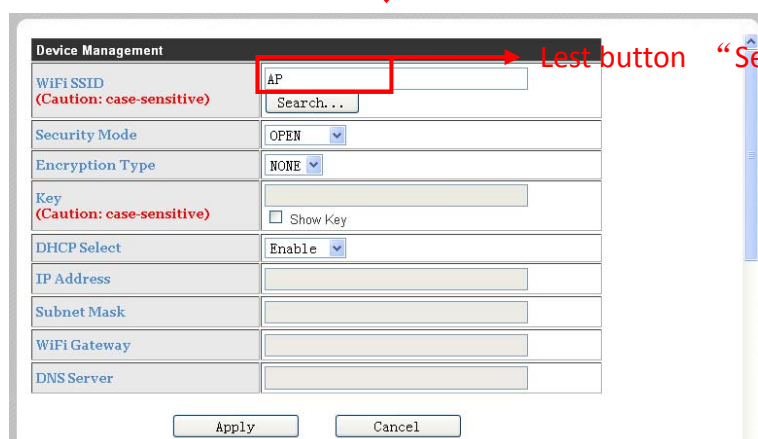
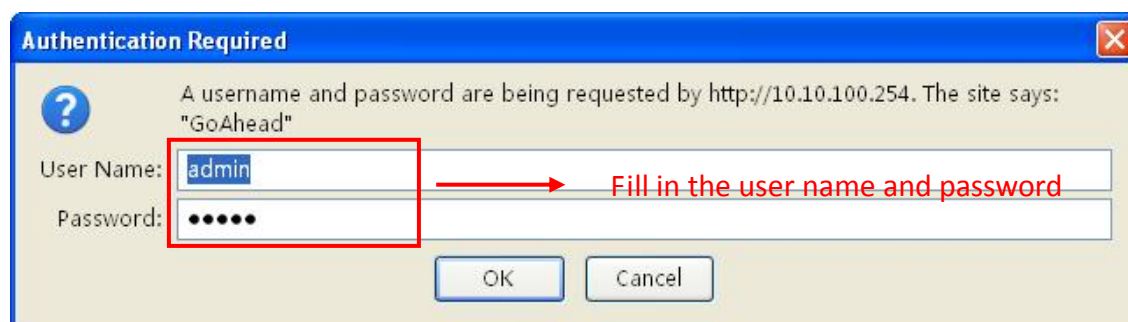
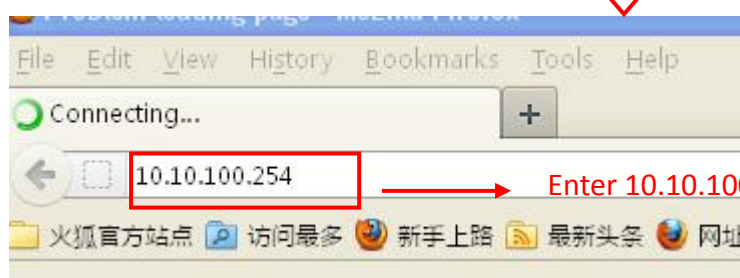
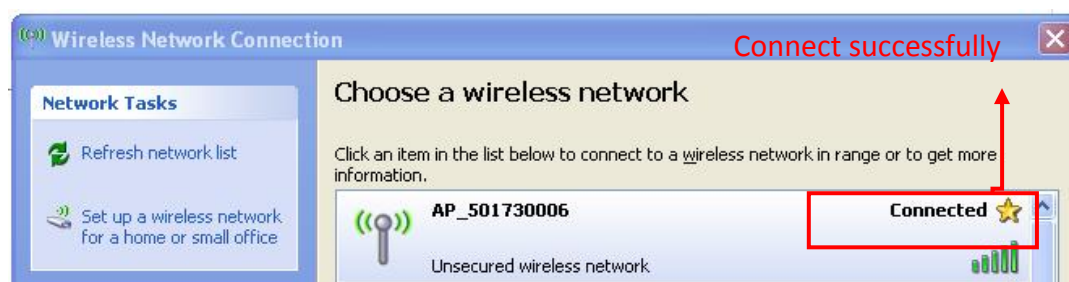




Left click



Choose WiFi Left Double Click





OK

Device Management

WiFi SSID (Caution: case-sensitive)	C2101	
Security Mode	WPA2PSK	
Encryption Type	AES	
Key (1~32 Bytes) (Caution: case-sensitive)	1234567890	
	<input checked="" type="checkbox"/> Show Key	
DHCP Select	Enable	
IP Address		
Subnet Mask		
WiFi Gateway		
DNS Server		

Annotations:

- Red box around "Search..." field with arrow pointing to "Do not fill in".
- Green box around "Show Key" checkbox with arrow pointing to "Whether display your password".
- Green box around "Enable" dropdown with arrow pointing to "“Disable” or “Enable” suggested".

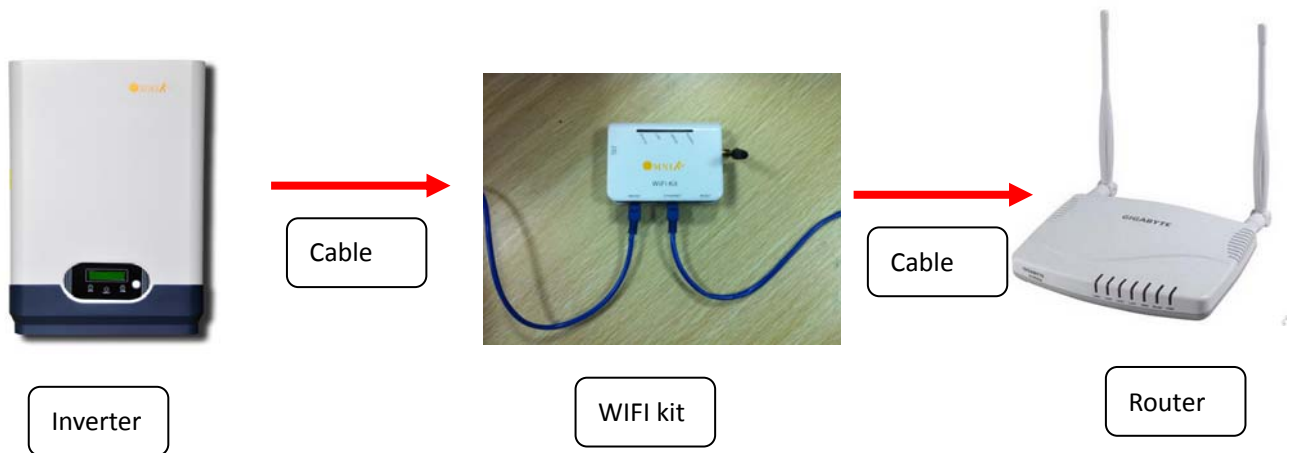
“Disable” or “Enable”,
“Enable” suggested

Apply

Set successfully. Rebooting. Please close this page manually!

10

5. Ethernet connection

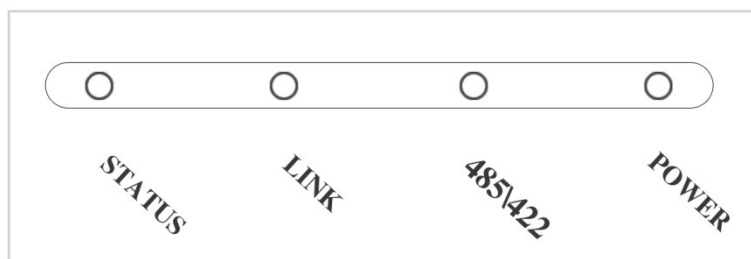


Step 1: Connect inverter, WIFI kit and your router with reticle (cable) , and do not need to set anything.

Step 2: Reset, if you have used the WIFI function.

6. Debug

LED indicating lamp Introductions



Picture 7

Name of LED	Status	Description of status
POWER	Light	The power is normal
	Dark	The power is abnormal
485\422	Light	The connection between collector and inverter is normal
	Flashing	Data is transferring between collector and inverter
	Dark	The connection between collector and inverter is abnormal
STATUS Dark	LINK Flashing	Connecting WiFi
STATUS Light	LINK Flashing	Data is transferring of WiFi
	LINK Light	The connection of collector is normal
	LINK Dark	The connection of collector is abnormal
STATUS Flashing	LINK Flashing	Data is transferring of port
	LINK Light	WiFi is in the AP way , a terminal is connecting with the equipment
	LINK Dark	WiFi is in the AP way , no terminal is connecting with the equipment

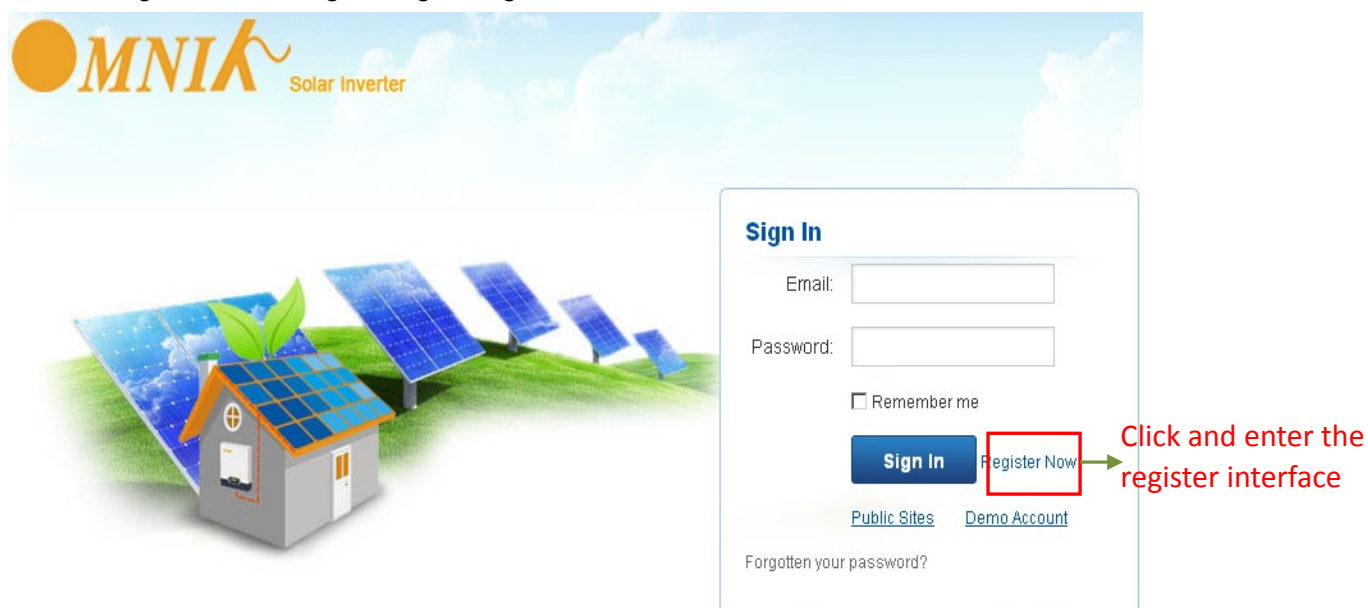
Trouble shootings with LEDs

phenomenon				Possible reasons	Dealing ways
POWER	485/422	LINK	STATUS		
Dark	Dark	Dark	Dark	Haven't connected to the power	Connect power and ensure that the power supply is good.
Light	Dark	X	X	The connection of inverter is abnormal	Check the connection cable is right and ensure that the order is according to 568-B
					Ensure the stability of RJ-45 connector line
					Confirm the status of inverter and ensure it's working condition is normal
Light	X	X	Flashing	In the AP Mode	Set network settings
Light	X	Flashing	Dark	Collector is not connected with WIFI	Confirm if the antenna is loose or fall off. If so, please screw it.
					Check if the WIFI wanted is covered.
					Restore the factory settings according to the installation manual and reset.
Light	Light	Dark	Light	Fail to connect the remote server	Please confirm that WIFI can be connected with the Internet.
Light	Dark	Dark	Dark	The system is initialized	Please wait. If there is no change in 2min, please reset the collector.
<p>Note1:x means the status is instability</p> <p>Note2: If the equipment still cannot work according to the above instructions, please connect your device customer service.</p>					

7. Register on monitoring website

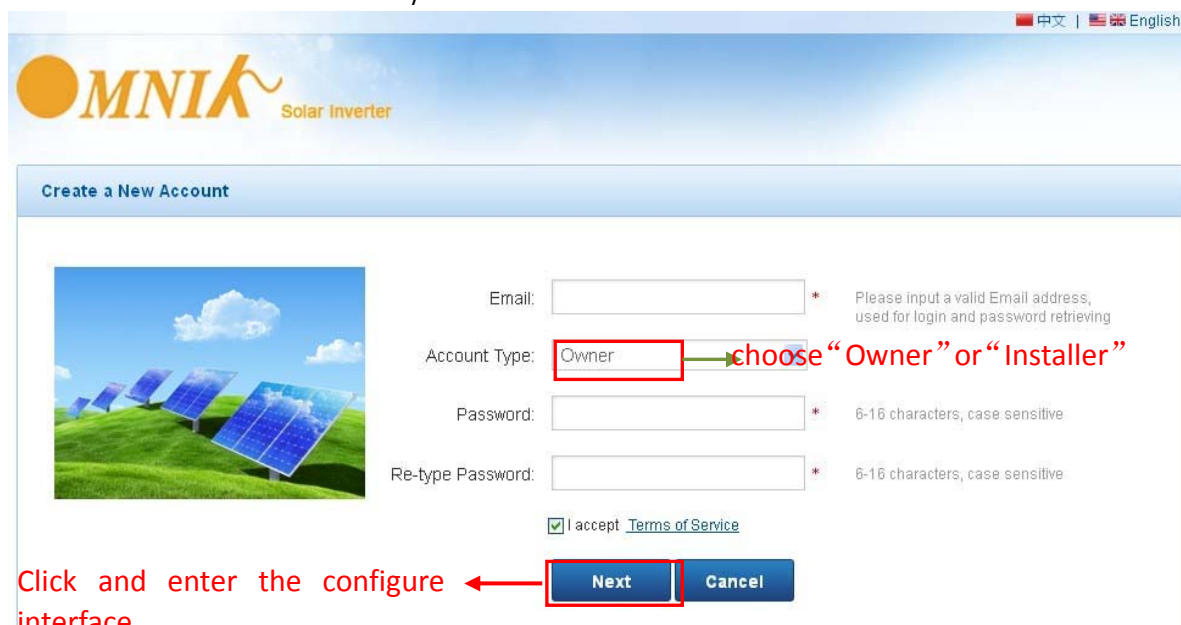
Our products supported by PV monitoring system Web site browser: IE8, Firefox, Chrome, safari, log into the website <http://www.omnikportal.com>, Click on register, enter the user registration page, follow the requirements for registration, after successful registration, enter the mailbox and activate the account, then complete the registration.

6.1 Click Register button to go to registering interface for new account



Picture 6-1

7.2 Fill in user's information as required

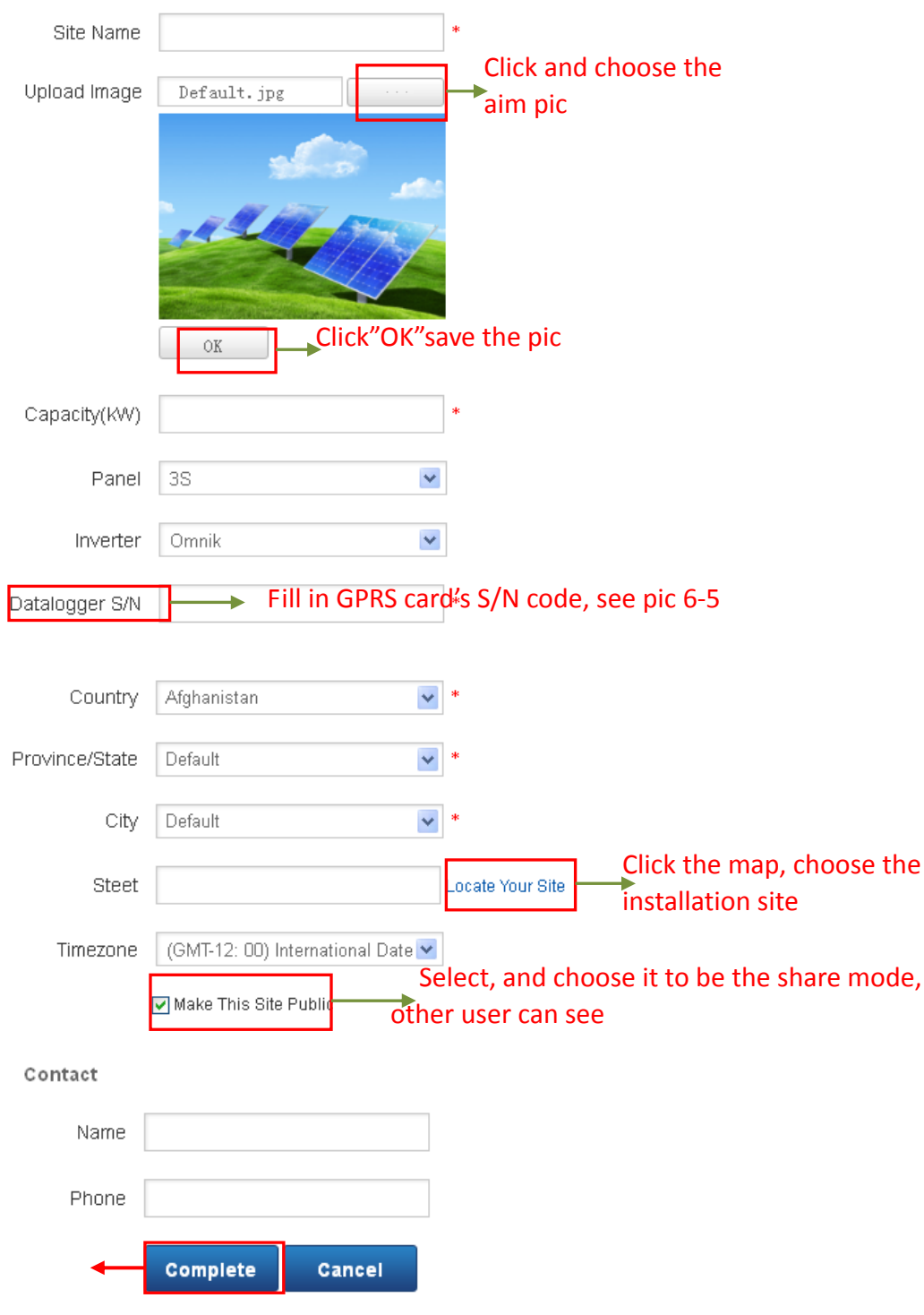


Picture 6-2

6.2.1 "Owner" Account


Remarks: please read the <Omnik service agreement >carefully, the enclosure is the cost list for all the countries, please choose your operators

Owner means the final user; **Installer** means the installer or distributor



Site Name *

Upload Image Click and choose the aim pic



Click "OK" save the pic

Capacity(kW) *

Panel ▼

Inverter ▼

Datalogger S/N Fill in GPRS card's S/N code, see pic 6-5

Country ▼ *

Province/State ▼ *

City ▼ *

Street Click the map, choose the installation site

Timezone ▼

☒ Make This Site Public Select, and choose it to be the share mode, other user can see

Contact

Name

Phone

Finish the register

Picture 6-3

6.2.2 "Installer" Account

Installer

Device

Datalogger S/N Fill in WiFi card's S/N, please see pic 6-5 *

Information

Company Name *

Address *

Telephone *

Contact *

Fax *

Complete

Cancel

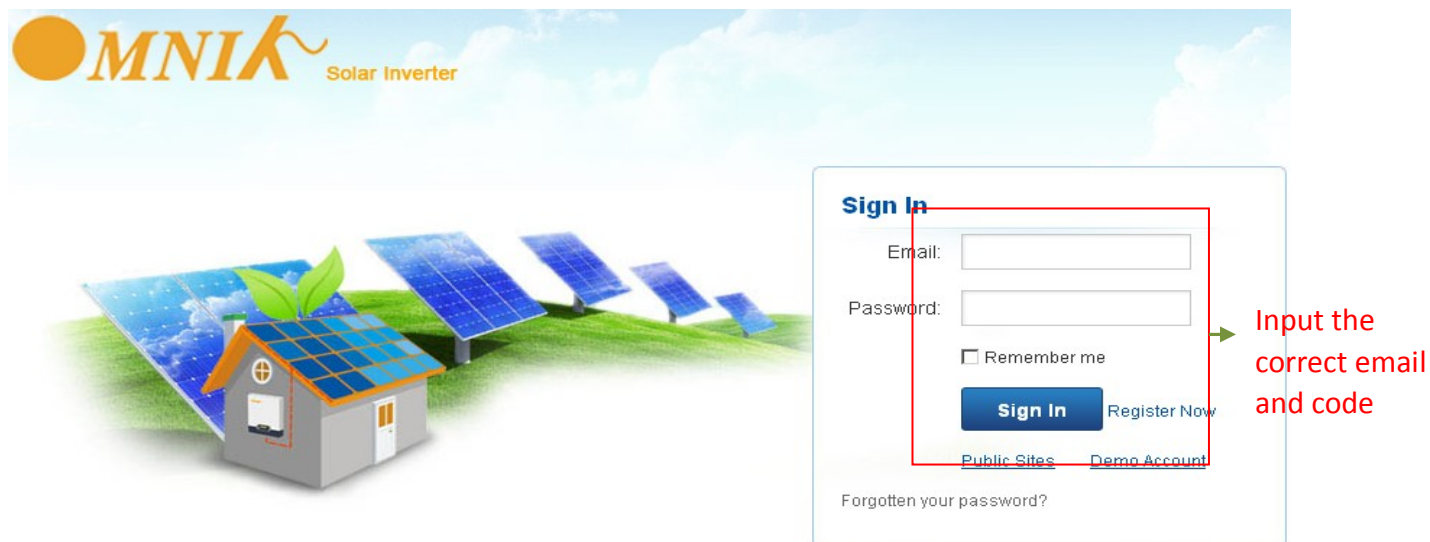
Picture 6-4



Picture 6-5

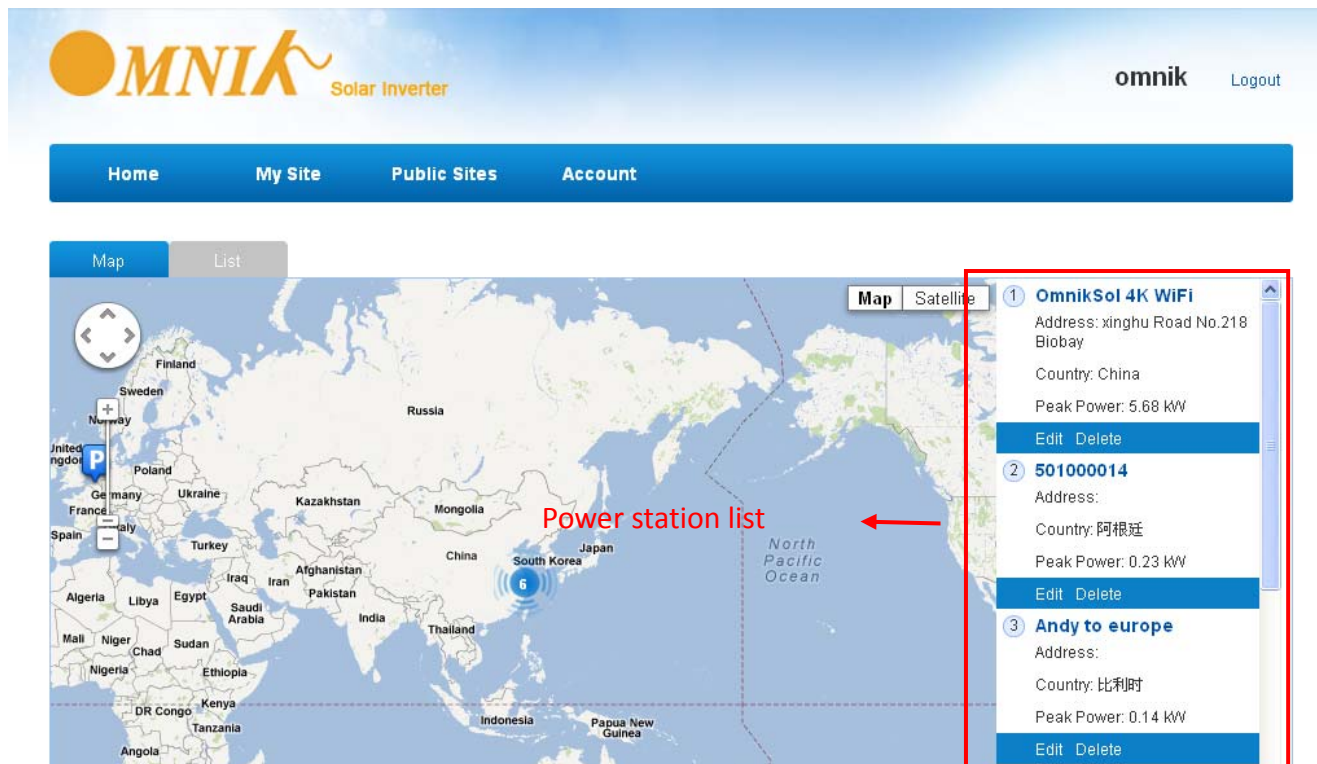
7. Login the PV monitoring system to manage the power station

After the successful register and account activation, open the login interface as below picture 7-1, input the correct email and code and enter the PV monitoring system, then you can monitor and manage the power station.

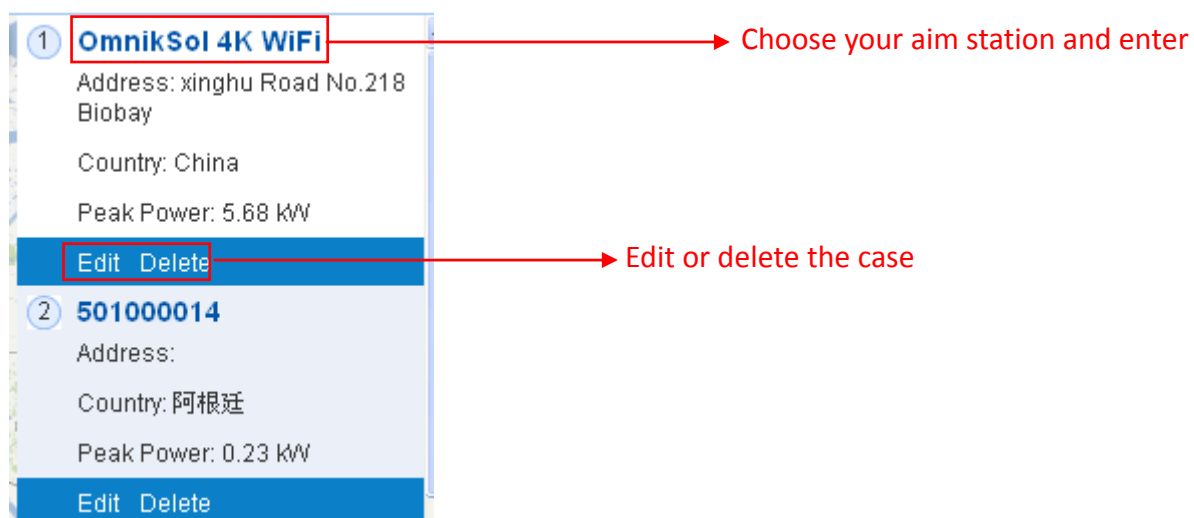


Picture 7-1

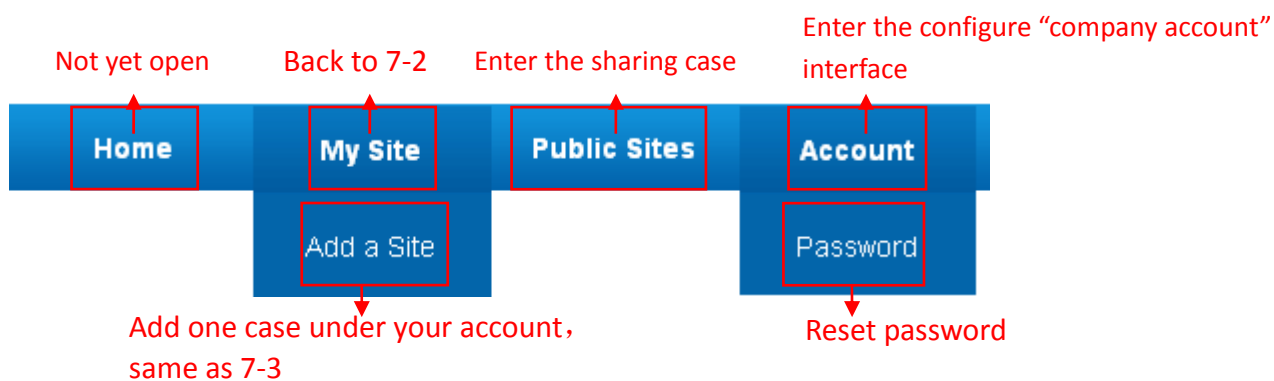
7.1 "Owner" User Interface



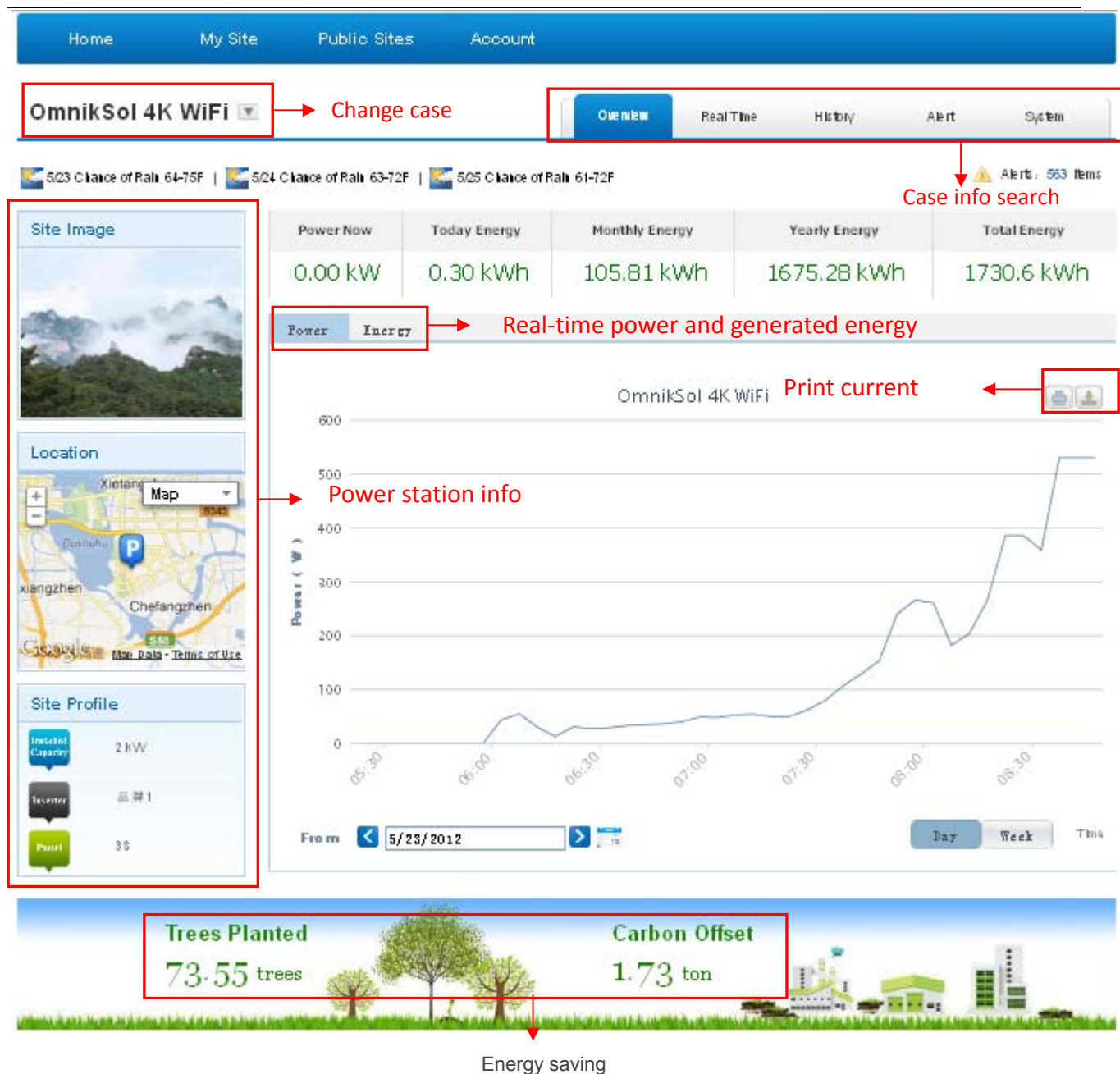
Picture 7-2



Picture 7-3 List of power stations



Picture 7-4 navigation bar



Picture 7-5 Main interface of power station

OmnikSol 4K WiFi Overview Real Time History Alert System

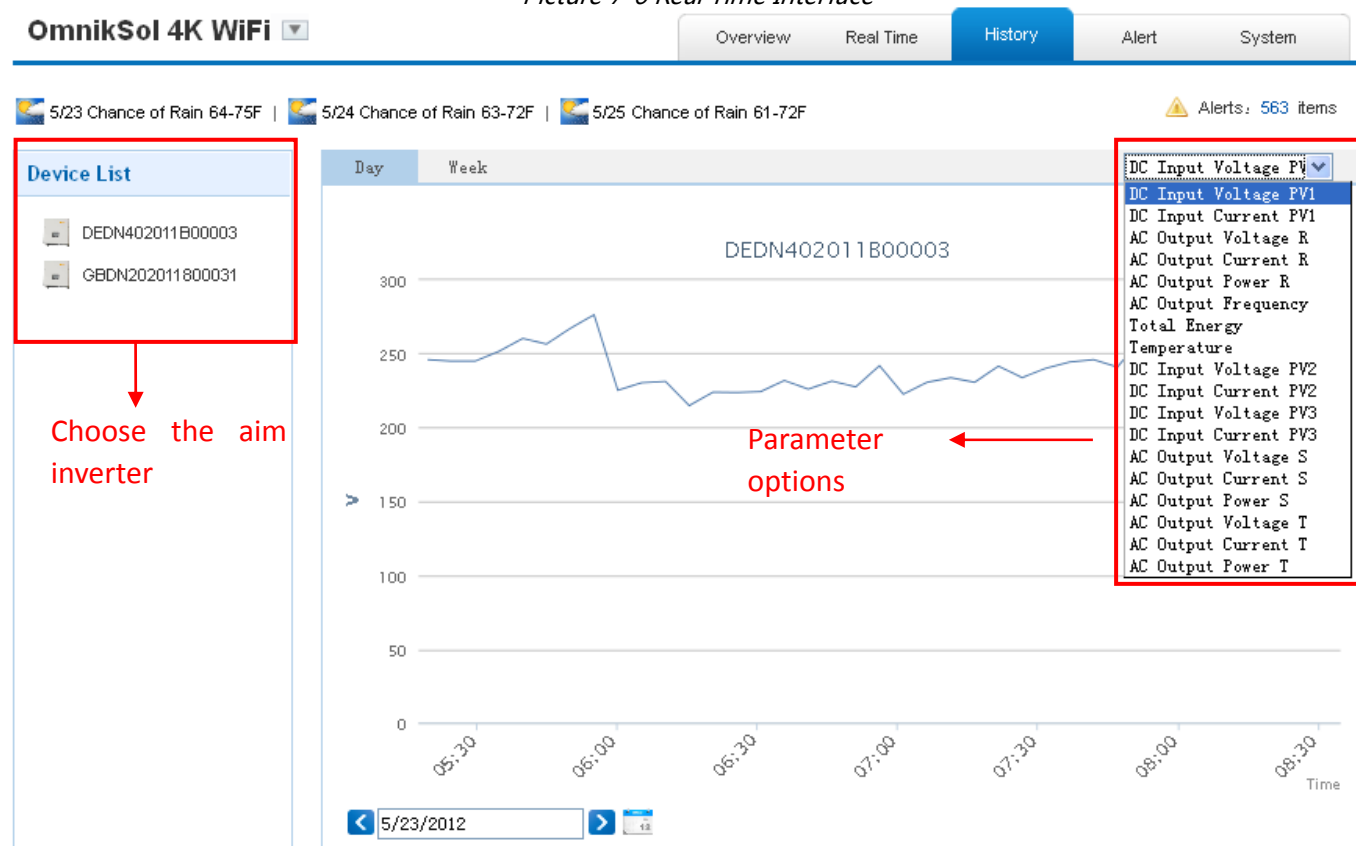
5/23 Chance of Rain 64-75F | 5/24 Chance of Rain 63-72F | 5/25 Chance of Rain 61-72F Alerts: 563 items

Internal temperature

No.	Inverter S/N	DC Input			Phase	AC Output			Frequency(Hz)	Total Energy (kWh)	Temp-erature(°C)	Time
		Channel	Voltage(V)	Current(A)		Voltage(V)	Current(A)	Power(W)				
1	DEDN402011B00003	PV1	255.5	2.2	R	231.8	2.2	529	50.04	1288.6	23.0	2012-05-23 08:32:56
		PV2	0.0	0.0	S	0.0	0.0	0				
		PV3	0	0	T	0.0	0.0	0				
2	GBDN202011800031	PV1	247.4	0.3	R	231.0	0.3	0	50.05	442	30.0	2012-04-16 17:34:48
		PV2	0.0	0.0	S	0.0	0.0	0				
		PV3	0	0	T	0.0	0.0	0				

Latest data collecting time

Picture 7-6 Real Time Interface



Picture 7-7 History Interface

OmnikSol 4K WiFi

Overview

Real Time

History

Alert

System

5/23 Chance of Rain 64-75F | 5/24 Chance of Rain 63-72F | 5/25 Chance of Rain 61-72F

Alerts: 563 items

Select: View All View All Page 1 of 57

Inverter	Inverter Manufacturer	Information	Code	Alert Time	Status	View History
DEDN202011800912	Default	Utility Loss	F09	3/8/2012 16:10:38	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:9:3	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 12:56:36	Unhandled	History
DEDN202011800912	Default	Utility Loss	F09	3/8/2012 16:11:38	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:14:7	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 13:1:42	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:19:10	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 13:6:38	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:24:14	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 13:11:42	Unhandled	History

Click, turn to picture 7-7

Picture 7-8 Alert Interfaces

OmnikSol 4K WiFi

Overview

Real Time

History

Alert

System

5/23 Chance of Rain 64-75F | 5/24 Chance of Rain 63-72F | 5/25 Chance of Rain 61-72F

Alerts: 563 items

Site

Device

The interface same as picture 7-3

Site Name OmnikSol 4K WiFi *

Upload Image Default.jpg



OK

Picture 7-9 System Setting Interface

OmnikSol 4K WiFi

Overview

Real Time

History

Alert

System

5/23 Chance of Rain 64-75F | 5/24 Chance of Rain 63-72F | 5/25 Chance of Rain 61-72F

Alerts: 563 items

Site

Device

	Datalogger S/N	Datalogger Name	Manufacturer	Operate
1	601230010		Unfound	Delete Edit
2	300000012	网关1	Unfound	Delete Edit

Add

Add

Datalogger S/N

OK

Picture 7-10 System Setting Interface

7.2 "Installer" User Interface

allen_dai@tom.com Logout

Home

My Device

Public Sites

Account

omnik Power station information

Overview

Real Time

History

Alert

Device

Device Number	Installed Devices	Uninstalled Device	Abnormal Devices
3	3	0	1

List

Map

Order: Device

Displaying Setup

Page 1 of 1

> <

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Collector info

Search

Inverter	View Device	Datalogger	Site	Maker	Owner	Installation Date	Update Time	Alerts
0000000000000000	Real Time History	401350001	OmnikSol 20K GPRS	Omnik	omnik-test		5/22/2012 10:09:24 PM GMT +8	4
AASN2030124B1000	Real Time History	401350001	OmnikSol 20K GPRS	Omnik	omnik-test		5/22/2012 10:09:24 PM GMT +8	0
AASN2030124U1000	Real Time History	401350001	OmnikSol 20K GPRS	Omnik	omnik-test		5/22/2012 10:09:24 PM GMT +8	1
AASN203012461000	Real Time History	401350001	OmnikSol 20K GPRS	Omnik	omnik-test		5/22/2012 10:09:24 PM GMT +8	0

X

☒ Inverter

☒ View Device

☒ Datalogger

☒ Site

☒ Maker

☒ Owner

☒ Installation

☒ Update Time

☒ Alerts

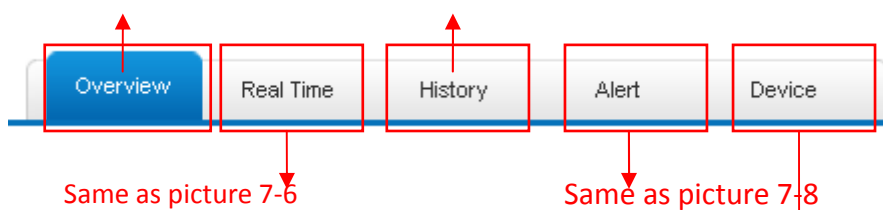
Date

Choose the target info you want to see

Picture 7-11 Home main interfaces

Same as picture 7-11

Same as picture 7-7



Same as picture 7-6

Same as picture 7-8

omnik

Overview Real Time History Alert Device

Batch Delete Displaying Setup

⏮ ⏪ Page 1 of 1 ⏩ ⏭

Search

	Datalogger	Site	Manufacturer	Owner	Installation Date	Update Time	Operate
<input type="checkbox"/>	4	igen-zzh-test		456		3/25/2012 11:14:41 PM GMT -12	Delete
<input type="checkbox"/>	5	igen-zzh-test		456		3/25/2012 11:14:41 PM GMT -12	Delete
<input type="checkbox"/>	401350001	OmnikSol 20K GPRS	Omnik	omnik-test		5/22/2012 10:09:24 PM GMT +8	Delete

Select All
Add

Add Device Information

Datalogger S/N *

OK


Picture 7-12

Omnik

Overview
Real Time
History
Alert
Device

Device Number	Installed Devices	Uninstalled Device	Abnormal Devices
425			

List
Map



Map
Satellite

1

OmnikSol 4K WiFi
 Address:xinghu Road No.218
 Biobay
 Country:China
 Peak Power:5.682 kW
Enter

2

OmnikSol 4K WiFi
 Address:xinghu Road No.218
 Biobay
 Country:China
 Peak Power:5.682 kW
Enter

3

Franz test PV station (GPRS Italy)

Click map, choose the aim station, you will enter picture 7-5, only can be view

Picture 7-13

24

8. Contacts

If you have any technical problems about our products , please contact us , you should confirm the follow things before contact us:

- ◆ Device model
- ◆ Data collector serial number
- ◆ The number of connected inverter

Add: Xinghu Road No.218 bioBAY Park C2, Suzhou China

Zip code : 215213

Fax: +86 512 6295 6682

Tel: +86 512 6295 6676

Mail: Sales@omnik-solar.com